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**DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA**

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**IN THE MATTER OF the Consideration
of the Adoption of Energy Policy Act of
2005 Standards Regarding Net Metering,
Fuel Diversity, Fossil Fuel Generation
Efficiency, Smart Metering, and
Interconnection**

UTILITY DIVISION

DOCKET NO. N2006.5.60

COMMENTS OF MONTANA-DAKOTA UTILITIES CO.

INTRODUCTION

The Energy Policy Act of 2005 ("EPACT") was signed into law on August 5, 2005. Sections 1251, 1252, and 1254 of EPACT establish additional federal standards for consideration by the Commission under the Public Utility Regulatory Policy Act of 1978 ("PURPA"). Section 1251 of EPACT establishes federal standards for Net Metering, Generation Fuel Diversity, and Fossil Fuel Generation Efficiency. Section 1252 establishes a federal standard for Smart Metering. Section 1254 establishes a federal standard for Interconnection.

PURPA does not require the Commission to actually adopt the new federal standards, but simply to consider their adoption after holding a public hearing in which interested parties may introduce evidence in support of or opposition to the adoption of the new standards. PURPA Sections 111(a) and 111(b)(1). Importantly, the federal requirement for Commission consideration of the proposed new standards does not apply in a state where its legislature has already considered legislation adopting a comparable standard. EPACT Sections 1251(d)(3), 1252(i)(1), and 1254(b)(3).

On May 5, 2006, the Commission issued what it denominated a Notice of Inquiry and Opportunity to Comment in Docket N2006.5.60 ("Notice of Inquiry"). The Notice of Inquiry invites comment upon the Commission's possible adoption of the new PURPA standards under the EPACT. Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc. ("Montana-Dakota") submits these comments in response to the Notice of Inquiry. It also requests a contested case hearing before the Commission adopts any of the EPACT standards.

Montana-Dakota sets forth each of the EPACT standards, describes whether the standard applies to the Montana Commission, and explains its position regarding possible adoption of the standard.

I. NET METERING

Section 1251(a)(11) of EPACT reads as follows:

Each electric utility shall make available upon request net metering service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term "net metering service" means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.

16 USC § 2621(d)(11).

A. The EPACT Net Metering Standard Does Not Apply to the Montana Commission.

The EPACT Net Metering standard does not apply to the Montana Commission under Section 1251(d)(3) of EPACT. 16 USC § 2622(d). The Montana Legislature has already considered and adopted a net metering requirement under Montana law. Mont. Code Ann. §§ 69-8-601 *et seq.* Accordingly, the federal EPACT standard does not apply to the Montana Commission. 16 USC § 2622(d).

The Montana Legislature decided that a net metering requirement should only apply

to an electric utility restructured in accordance with the Electric Utility Industry Restructuring and Customer Choice Act. Mont. Code Ann. §§ 69-8-101 *et seq.* It specifically exempted Montana-Dakota from net metering requirements. Mont. Code Ann. § 69-3-201(9). Further, the Montana Legislature determined that net metering should not be required by any utility when the customer is generating more than 50 kw of power. Mont. Code Ann. § 69-8-103(22)(b).

B. The Commission Should Not Adopt the Net Metering Standard.

Even if the Montana Legislature had not voted upon and adopted a net metering standard for Montana, Montana-Dakota would urge the Commission not to adopt the EPACT standard. Clearly net metering provides substantial financial incentives to customers interested in self generation. However, it does so at the expense of all the other customers on the Montana-Dakota system. Not only does net metering allow generating customers to generate electric energy for their own requirements, it also provides what can be a lucrative market for their electric energy produced during periods when it is not needed for their own use. Unless a utility's retail rate structure accurately reflects separate cost based components for energy, capacity, and customer related services, the offset mechanism in the EPACT net metering standard will result in significant subsidies to generating customers at the expense of the utility's other customers. This is aptly described in Reference Manual and Procedures for Implementation of the "PURPA Standards" in the Energy Policy Act of 2005 at page 8 ("*Reference Manual*")¹:

Rate equity concerns are probably the primary area for analysis in deciding whether or not to adopt net metering standards and if so, how to design them. Under certain circumstances, net metering can undermine the equity of retail

¹ Prepared by Kenneth Rose and Karl Meeusen for the American Power Association, Edison Electric Institute; the National Association of Regulatory Utility Commissioners, and the National Rural Electric Cooperative Association (March 22, 2006).

rates. Because net metering policies provide for customer-generated kWhs to be netted on a one-for-one basis with utility-delivered kWhs, net metering policies require utilities to pay consumers the retail price for wholesale power. That means the utility is paying for services typically included in retail rates that the consumer is not providing the utility, including distribution, transmission, utility operating and maintenance expenses ("O&M"), utility administrative and general expenses ("A&G"), and sometimes taxes and public benefits charges as well. These costs will generally be recovered from other consumers on the utility's system, leading to a cost shift from customer-generators to all other customers on the system.

The concerns expressed in the *Reference Manual* are real and substantial. Technology improvements and increased energy prices will provide customers, particularly large commercial customers, with the opportunity and financial incentive to purchase larger generators than have been historically available. As noted in the *Reference Manual* at pages 39-40:

As discussed below, many states and utilities that have adopted net metering plans have addressed rate equity issues by adopting limitations on one or more of: the customers entitled to net metering service, the capacity of generators or the type of generating techniques entitled to net metering service. In some cases, states and unregulated utilities have determined that adopting the very simple net metering approach for some limited consumers and some generators could prove more cost effective for the implementing utility than the cost of the metering equipment and accounting resources required to adopt other mechanisms for the measuring and valuing of customer-owned generation. Some others have concluded that, with appropriate limits, net metering would have too small an impact on other consumers' rates to merit concern. Others have adopted net metering because they have placed greater weight on other state policies than on rate issues.

Similar considerations led the Montana Legislature to limited net metering to small facilities of 50 kw or less. Mont. Code Ann. § 69-8-103(22)(b).

The *Reference Manual* at page 39 also identifies operational considerations that would have to be addressed prior to the adoption of any broad net metering requirement:

Net metering may have a minimal effect on efficiency goals addressed in PURPA. However, to answer that question would require a resource intensive analysis of the type of generation that the utility uses, the type of

generation that would be promoted by the net metering program, and the interaction between the two. Additionally, though a net metering standard may not have a direct impact on utility operations or resource allocation, by promoting the installation of customer-owned generation to replace some utility generation, the net metering standard could have a marginal impact on the utilization of the utility's generation resources. If highly efficient customer-owned generation operates at times that permit the utility to reduce usage of less efficient generation, it could have a positive impact. If, on the other hand, inefficient customer-owned generation replaces utility-owned generation with a much lower heat rate, the effect could be negative.

For the reasons described in the *Reference Manual*, Montana-Dakota would urge the Commission not to adopt the EPACT Net Metering standard, even if the Montana Legislature had not already voted upon the issue.

C. Montana-Dakota's Rate 94 Should be Eliminated or Amended.

Montana-Dakota believes that net metering or net billing should be limited to small generation customers that cannot sell their excess electric energy into the market; that all customer generated energy delivered to the utility should be compensated based on the wholesale market prices at the time of delivery; and that the customer should be responsible for the costs of any metering to enable such pricing. In essence, customer generators are independent power producers and should be considered as such when fashioning or revising net metering rules or tariffs.

Montana-Dakota has had in place for many years its Rate 94, entitled "Net Billing Option". It applies to qualifying facilities ("QFs") as defined in PURPA. It incorporates the net metering standard of Section 1251 of EPACT by providing that a customer's generation may be used to offset electric energy delivered by Montana-Dakota to the customer. Rate 94 was implemented by Montana-Dakota in response to ARM 38.1905(6) and the Commission's Order 4865, page 17, in Docket No. 81.2.15, In the matter of Avoided Cost Based Rates for Public Utility Purchases for Qualifying Cogenerators and Small Power

Producers. In that docket, the Commission determined that QFs must be given the option of operating in parallel with a single meter measuring net consumption or production.

Section 1253 of EPACT now allows the Federal Energy Regulatory Commission to provide exemptions from a utility's obligation under PURPA to purchase from QFs that have access to competitive energy markets. 16 USC § 824a-3(m). QFs should not be allowed to use net metering as a method to avoid an exemption granted under Section 1253 of EPACT. Rate 94 should either be eliminated by the Commission, or amended to match the 50 kw limitation prescribed by the Montana Legislature for net metering.²

II. GENERATION FUEL DIVERSITY

Section 1251(a)(12) of EPACT reads as follows:

Each electric utility shall develop a plan to minimize dependence on 1 fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including renewable technologies.

16 USC § 2621(d)(12).

A. The EPACT Generation Fuel Diversity Standard Does Not Apply to the Montana Commission.

The EPACT Generation Fuel Diversity standard does not apply to the Montana Commission under Section 1251(d)(3) of EPACT. 16 USC § 2622. The Montana Legislature has already voted upon and adopted two comparable standards which effectively determine generation fuel mix. The first, the Montana Integrated Least-Cost Resource Planning Act ("IRP Act") was adopted in 1993. Mont. Code Ann. §§ 69-3-1201 *et seq.* The second, the Montana Renewable Power Production and Rural Development Act ("Renewable Act") was adopted in 2005. Mont. Code Ann. §§ 69-8-1001 *et seq.*

² Montana-Dakota does not expect the Commission to issue an order on Rate 94 in the absence of a filing and contested case hearing. It is merely advising the Commission of work that needs to be done.

Accordingly, the EPACT Generation Fuel Diversity standard does not apply to the Montana Commission. 16 USC § 2622(2).

Under the IRP Act, generation fuel type is objectively determined through the application of least cost planning principles. Rather than subjectively and arbitrarily specifying a generation fuel mix, the IRP Act directs the appropriate selection of generation resources and fuel types under a cost effectiveness test. Mont. Code Ann. § 69-3-1204(2). The IRP Act allows resource selection, and generation fuel mix, to be made on a utility specific basis, effectively capturing the unique operating characteristics of, and generation fuel choices available to, each jurisdictional utility. Any Commission attempt to subjectively determine a generation fuel mix without reference to the IRP Act would violate both its spirit and its letter.

Under the Renewable Act, a portion of each jurisdictional utility's generation portfolio is set aside for a specific fuel type - cost effective renewable resources. By the year 2015, 15% of Montana-Dakota's energy requirements in Montana must be met with renewable resources as defined in the Renewable Act.³ The Renewable Act ties to the standards of the IRP Act, as the resource specification set out in the Renewable Act incorporates the same notions of cost effectiveness contained in the IRP Act. Mont. Code Ann. § 69-8-1007.

B. The Commission Should Not Adopt the Generation Fuel Diversity Standard.

Even if the Montana Legislature had not voted upon and adopted comparable standards to generation fuel diversity, Montana-Dakota would urge the Commission not to adopt the EPACT Generation Fuel Diversity standard. Such a standard would not be

³ Although the Renewable Act was codified in a fashion which indicates Montana-Dakota is exempt from its provisions under Section 69-8-201(9), Mont. Code Ann., the Commission has determined in a rulemaking proceeding that it was a codification error, and the Renewable Act applies to Montana-Dakota. 2006 MAR, Issue No. 11 at page 1462.

meaningful, particularly for Montana-Dakota. Montana-Dakota's existing generation effectively defines its generation fuel mix. It has no nuclear or hydroelectric facilities. Its current fuel choices are coal, natural gas, fuel oil and renewables. Even within the range of those choices, its existing generating resources define the actual mix of fuel types. Of the 490 megawatts of Company owned generation, 124 megawatts, or 25%, is fueled by either natural gas or fuel oil, and the remaining 366 megawatts, or 75% is fueled by coal.⁴ Other than the substitution of fuel oil for natural gas at its combustion turbines, fuel type is set by the nature of its generating units.⁵

The Commission's adoption of a Generation Fuel Diversity standard could only affect Montana-Dakota's acquisition of incremental new resources. Unless cost effectiveness is abandoned as the controlling consideration in the acquisition of new resources, the fact that Montana-Dakota's service territory is located in the middle of the largest coal reserves in the world, in the middle of a large area of natural gas reserves, and in an area with significant potential for wind development, is determinative. Within that universe of likely fuel choices, least cost planning principles will drive resource optimization and fuel choice. There is no good reason to depart from the existing standard for determining generation resource choice and corresponding generation fuel mix.

III. Fossil Fuel Generation Efficiency

Section 1251(a)(13) of EPACT reads as follows:

Each electric utility shall develop a 10-year plan to increase the efficiency of its fossil fuel generation.

⁴ Montana-Dakota has contracted for 30 megawatts of wind power, but the construction of that resource has not yet begun.

⁵ Montana-Dakota's combustion turbines at Miles City and Glendive are dual fuel turbines, with the capability of burning either natural gas or fuel oil.

16 USC § 2621(d)(13).

A. The Commission Should Not Adopt the Fossil Fuel Generation Efficiency Standard.

The Commission should not adopt the EPACT Fossil Fuel Generation Efficiency standard. Currently, all of Montana-Dakota's generation is fossil fueled. Neither nuclear nor hydroelectric generation is an option for Montana-Dakota. Although it has contracted to add renewable resources to its generation mix, the 30 megawatts of wind power for which it has contracted is not yet under construction. Montana-Dakota's need to meet its customers' load requirements, and its need to participate in the MISO market, already drives it to wring out all available efficiencies in its existing generation. The Company has been a leader in refurbishing existing thermal generation with its installation of a fluidized bed in the Heskett # 2, Generating Station, a 1963 vintage coal fired power plant.

The energy efficiency of generation is usually measured by heat rate, the amount of energy needed to produce a kw of electricity. In the case of the Company's combustion turbines, the heat rate is largely fixed by the design of the installed generation. In the case of the Company's coal fired units, the heat rate is largely determined by boiler design and choice of coals. The boilers and ash handlers on Montana-Dakota's existing coal fired generation facilities are designed to use the lignite coal available in the Montana-Dakota service territory. Although the operation of the newer boilers, such as the 1975 boiler at the Big Stone Generating Station, have been successfully modified to use sub-bituminous coal, that is not a very realistic option for the boilers at the older power plants.

Practically speaking, the search for more generating efficiencies in existing coal fired generation resources will be constrained by the regulation of air emissions under the laws of the states in which the power plants are located. As a general rule, modification of an existing coal fired generation resources keys in what are called the New Source

Performance Standards under the Clear Air Act. Only the 48 megawatt Lewis and Clark Station at Sidney is located in Montana. If the Commission adopted the EPACT Fossil Fuel Generation Efficiency standard in Montana, it would be committing both itself and Montana-Dakota to a significant compliance task (studying possible efficiencies) with little practical way of implementing the findings outside the State of Montana.

IV. SMART METERING

Section 1254(a)(15) of EPACT, if adopted by the Commission, would require Montana-Dakota to offer Time of Use Pricing ("TOU"), Critical Peak Pricing ("CPP") and Real-Time Pricing ("RTP") to all of its electric customers in Montana. For Montana-Dakota to provide such services, it would have to equip its Montana customers, or at least be prepared to equip its Montana customers, with the advanced metering technology, or "smart meters" necessary to provide the services. Additionally, to provide such services, Montana-Dakota and the Commission would have to devote very significant resources to preparing and analyzing a detailed cost of service study which would measure and allocate the costs of providing such services and establish the billing determinants necessary for the required rate structures.

The Smart Metering standard has been described as "the most complex and encompassing" of the five EPACT standards. *Reference Manual* at page 72. It is fair to state that the cost to the Montana-Dakota customer of implementing the standard could be very large. Just how large would depend, in part, upon whether the costs of implementing the standard, and providing the required services, would be assessed against the customers on the new services contemplated under the standard, or spread to all Montana-Dakota customers. Since the Commission regulates Montana-Dakota's rates and conditions of service, a Commission decision to adopt the EPACT standard would require a

significant and immediate commitment of both the Commission's, and the Montana Consumer Counsel's scarce resources.

Any consideration of adopting the Smart Metering standard raises an immediate and large policy question. Would the required rates structures be optional, or mandatory? If they were optional, adverse selection would largely destroy the underlying economic rationale for the rates. Under an optional rate structure, only the customers who weren't the cost causers would sign up for the optional rates, while the cost causers would stay on the existing uniform rate structures to avoid responsibility for their true costs. If the rate structures were mandatory, Montana-Dakota's customers would be exposed to very substantial price risk. Moreover, the capital costs for the required smart metering associated with a mandatory rate structure could be a significant burden to the ratepayer.

Certainly, there should be consideration given to the kinds of services encompassed within the EPACT Smart Meter standard. However, a mandatory flash cut to such services seems ill advised, and highly risky for Montana-Dakota and its customers. Montana-Dakota's generation resources are relatively homogenous, and its Montana service territory largely rural. A measured and cautious approach to the rate structures proposed in the EPACT standard, such as selective consideration in future rate cases, seems much more appropriate. Such an approach is only possible if the Commission first rejects the adoption of the EPACT standard.

Montana-Dakota began using solid state, smart, electric meters in the late 1980's. Today, smart meters purchased for commercial customers are complex, programmable, flexible, multi-purpose devices. They can be used for normal power measurement but in addition, the same meter can be enabled for reactive measurement, time-of-day, load

profiling and power quality. Also there are many options to remotely communicate with the meters.

Utilizing smart metering technologies, Montana-Dakota offers various rates and services to customers in various parts of its service territory. Examples that utilize smart metering include Time-of-Use rates, dual fuel rates, radio controlled load management programs and providing consumption data to larger customers to assist in managing their load. Montana-Dakota submits that its incremental approach is much superior to the kind of flash cut approach specified in the EPACT standard.

V. INTERCONNECTION

Section 1254(a)(15) of EPACT reads as follows:

Each electric utility shall make available, upon request, interconnection service to any electric consumer that the electric utility serves. For purposes of this paragraph the term 'interconnection service' means service to an electric consumer under which an on-site generating facility on the consumer's premises shall be connected to the local distribution facilities. Interconnection services shall be offered based upon the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, as they may be amended from time to time. In addition, agreements and procedures shall be established whereby the services are offered shall promote current best practices of interconnection for distributed generation, including but not limited to practices stipulated in model codes adopted by associations of state regulatory agencies. All such agreements and procedures shall be just and reasonable, and not unduly discriminatory or preferential

16 USC §2621(d)(15).

A. The Commission Should Not Adopt the Interconnection Standard.

Montana-Dakota urges the Commission not to adopt the EPACT Interconnection standard. It neither addresses nor fixes any problem areas for Montana-Dakota, its customers, or independent power producers.

The EPACT Interconnection standard really doesn't do much more than endorse

IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems ("IEEE 1547"). The interconnection guidelines set forth in IEEE 1547 reflect a collaborative effort between engineers, regulators, utilities, and others to implement general guidelines for interconnection. The guidelines provide minimum operational requirements that are universally needed to help ensure a technically sound interconnection. However, they are not yet complete, and will likely not attempt to address every local condition that may arise in providing an interconnection. IEEE 1547 was originally written and affirmed in 2003. One additional supporting document, IEEE 1547.1, was written and affirmed in 2005. It is presently planned that there will be a series of additional supporting documents, 1547.2 through 1547.6, which are not yet written or affirmed, but may be in various stages of draft form. It is unknown what these documents may ultimately contain.

At least presently, and with the exception of isolation devices, IEEE 1547 provides no specification of the hardware or other equipment required for a safe and reliable interconnection. Nor does it attempt to specify exactly how an interconnection is to be made. Such details have been left up to the interconnecting parties, which is already industry practice and Montana-Dakota standard protocol.

IEEE 1547 is not the IEEE's first attempt to create a standard for interconnection of distributed resources. In 1988, the IEEE created ANSI/IEEE Standard 1001-1988 titled, "IEEE Guide for Interfacing Dispersed Storage and Generation Facilities with Electric Utility Systems". The documents associated with this standard were withdrawn by the IEEE in 1997, once it was decided to develop a new standard. Standard 1001-1988 went into much more detail about hardware and equipment requirements for the interconnection than IEEE 1547 does, or likely will. The 1001-1988 standards were essentially designed to fit a specific type of electric grid, and did not work well as a uniform interconnection design for all

electric grids. When Montana-Dakota received two requests for interconnection in 1989, it developed a document titled, "Guidelines for Interconnection Requirements and Parallel Operation of Customer Owned Generation". This document relied heavily on the information contained in Standard 1001-1988, but made necessary adjustments in the various recommended interconnection designs so that interconnections could be safely made at the locations and under the conditions likely to be encountered on Montana-Dakota's system. As a result, there are presently 19 different interconnection designs shown in Montana-Dakota's guideline, with many more slight variations possible to satisfy both the needs of the generator and the requirement to maintain the integrity of the grid.

Montana-Dakota's interconnection guideline is intended as a technical aid to the parties designing the interconnection. Unlike IEEE 1547, it specifically targets the technical requirements for operation, the hardware and equipment requirements for the interconnection, and the testing of the equipment and control systems to insure proper operation of the equipment. The targeted items are intended to help insure safety, power quality, and reliability of the grid. The interconnection guideline is a document specific to Montana-Dakota's grid system.

It is Montana-Dakota's intention to revise its interconnection guidelines as necessary to keep in tune with the new IEEE 1547 standards as they develop. However, until those standards are actually developed, it would be inappropriate to blindly declare adherence to them. If Montana-Dakota had declared blind adherence to the 1001-1988 standards before they were adopted, it would have been impossible to design safe and effective interconnections on the Montana-Dakota system.

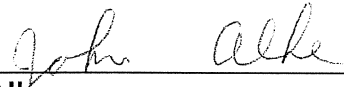
CONCLUSION

There is not a compelling case for the adoption of the five EPACT standards. In a very real sense, energy policy as applied to electric utilities in Montana is ahead of what is being considered at the federal level in EPACT. Comparable standards have already been adopted by the Montana Legislature and implemented by the Commission for Net Metering and Generation Fuel Diversity. Montana-Dakota sees little practical benefit for its customers in the work it would take to comply with the EPACT standards, if adopted by the Commission. Montana-Dakota urges the Commission not to adopt any of the five EPACT standards.

DATED this 21st day of June 2006.

HUGHES, KELLNER, SULLIVAN & ALKE, PLLP

BY:



John Alke
40 W. Lawrence, Suite A
P.O. Box 1166
Helena, MT 59624-1166

Attorneys for Montana-Dakota Utilities Co.